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SKO-104-A-1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Tojo et al.
Serial Number:	08/627,270
U.S. Filing Date:	April 4, 1996
Group Art Unit:	3726
Examiner:	J. Gorski
Title:	"Method and Machine for Forming Protective Film on Sprayed Coating of Large-Sized Product"

BRIEF ON APPEAL

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In connection with the above-identified application, and further to the Notice of Appeal dated September 25, 1998, please enter this Brief on Appeal pursuant to 37 CFR 1.192.

REAL PARTY IN INTEREST

The real party in interest is the owner/assignee of the application, which is Honda Giken Kogyo Kabushiki Kaisha.

RELATED APPEALS AND INTERFERENCES

This application is a divisional of patent application 08/398,881, which is also pending on appeal.

STATUS OF CLAIMS

Claims 14-16, 19, 20, 26, 27 and 30-37 are pending in the application. Of those claims, claims 14-16, 19, and 34-36 are subject to a restriction requirement, and have been withdrawn from consideration.

Claims 20, 26, 27, 30-33 and 37 have been rejected by the Examiner in the Office Action of July 8, 1998, and the rejection of these claims is being appealed. Of these pending claims which are pending on appeal, Claim 20 is independent. A copy of claims 20, 26, 27, 30-33 and 37 on appeal is attached hereto as an Appendix.

STATUS OF AMENDMENTS

Subsequent to the Final Rejection in the Office Action of July 8, 1998, appellant filed a Notice of Appeal, but did not file another amendment. Prior to the Final rejection, appellant filed a Preliminary Amendment A on April 4, 1996, an amendment B on May 22, 1997, and an Amendment C on February 2, 1998. All of these amendments A-C are believed to have been entered into the application file record.

SUMMARY OF THE INVENTION

The invention on appeal pertains to an efficient method of forming a high-quality, strippable protective film on a surface of a spray-coated (painted) finish of an automobile, and

particularly to such a method which is efficiently incorporated or combined into an automobile assembly process to thereby eliminate the need for certain steps of a conventional automobile assembly process.

Typically after an automobile is manufactured, but before it is shipped by the manufacturer or dealer to a destination, it is initially kept in stock for an interval of time, which may in some cases be relatively long. During pre-shipment storage, dust or the like tends to accumulate on, and adhere to the outer surface of the painted automobile. In order to prevent this dust adhesion, it is conventionally known to form a protective film on the automobile painted surfaces, typically by applying a liquid, rust-preventative wax.

In addition, during a manufacturing assembly-line process, it has become common to temporarily attach scratch guards to vehicle fenders, to avoid scratch damage by tools and equipment as a vehicle under construction moves down the line. However, these scratch guards require labor to install and remove them from each of the vehicles, and necessitate some cash outlay for their acquisition and storage when not in use.

In recent years, techniques for alleviating the burden of removing the protective wax film, at the destination of the automobile or for environmental protection, have been disclosed. For example, in Japanese Laid-Open Publication No. 267171/1991, a plastic film having a removable pressure-sensitive adhesive is pressed against the surface of an assembled painted automobile, using a vacuum. Thus, the vehicle body surface is coated with such plastic film and is thus temporarily protected from dust adhesion or the like. In the method of this Japanese reference, the entire surface of the automobile is covered with the protective film, including those portions which are not required to be protected such as the windshield,

and this undesirably leads to increased costs.

With regard to smaller products, a strippable paint (usually water soluble) has been spayed on the product to form a protective film thereon. Where a strippable paint is employed, it is possible to protect only desired portions, but if the strippable paint is applied to a large sized product such as an automobile, in a conventional manner, certain problems and disadvantages result. For example, if the spay coated object to which the strippable paint is applied is an automobile, the protective film lacks uniformity because of nonuniform drying, the film is damaged by matter adhering to the surface of the coating, or other problems may take place.

Further, contaminants such as dust, dirty water, rain water, etc. often adhere to the spray coated finish of an automobile, and such contamination hinders appropriate and smooth formation of a protective film when a strippable paint is applied thereto. Moreover, the temperature of the spray coated finished surface of the vehicle often drops, and this makes it difficult to form a protective film on the surface thereof.

The present invention has been developed to overcome the problems and disadvantages attendant conventional processes of forming strippable, protective films on spray-coated finishes of large-sized products such as automobiles, and to provide an efficient automobile assembly process incorporating same. See pages 1-4 of the specification.

With reference to Figs. 1 and 8 of the present drawings, a method of forming a protective film on a paint-finished automobile involves the step of:

painting the automobile so that it is paint-finished (43);

coating strippable paint on a painted surface of the paint-finished automobile (45); and

then assembling the paint-finished automobile by mounting an engine and functional parts thereto (44).

Appellant respectfully submits that such method according to the invention, which corresponds to claim 20 on appeal, is very advantageous and desirable in the art because it efficiently combines the formation of a protective, strippable paint film on a paint-finished automobile into a conventional automobile assembly process such that some steps of the conventional assembly process may be eliminated. Particularly, by coating the strippable paint onto the paint-finished automobile surface *prior* to the step of assembling the motor and functional parts to the automobile during the assembly process, applicant has advantageously eliminated the conventionally necessary steps of applying an anti-scratch cover over the paint-finished surface prior to the assembling step and removing the anti-scratch cover after the assembling step. The claimed invention eliminates the cost of the anti-scratch cover and the cost of applying and removing same, while otherwise protecting the paint-finished surface of the entire vehicle from dust, dirt, etc. which is invariably generated in the fitting-out or assembly step as discussed at pages 25-26 of the specification.

According to other important aspects of the invention the method may also involve: an elevated temperature drying process (9) after the strippable paint is coated on the automobile's paint-finished surface, including a step of preliminarily or partially drying (7) the strippable paint using a first drying means such as infrared radiation, and subsequently, non-preliminarily or finally drying (8) the partially dried product using a second drying means such as hot air; a stabilizing step (5) in which the strippable paint as applied to the surface of the automobile is stabilized at room temperature, in a setting booth for example, over a period

of time prior to drying (9); and a step of finished product inspection step subsequent to the assembling step. The partial drying step (7) is preferably performed using infrared radiation because it promotes drying of the strippable paint from inside thereof, the final drying step (8) preferably involves use of hot air because it promotes uniform drying of the strippable paint over the entire automobile surface, and the stabilizing step permits the strippable paint to stabilize prior to the drying process. The stabilizing step and two drying steps each function to achieve a very high quality protective film.

See page 14 , line 6 - page 15, line 25 of the specification. The final inspection step is combined together with the strippable paint coating step and the assembling step for a very efficient and cost-reducing method for the automobile manufacturer.

ISSUE ON APPEAL

I. The sole Issue on Appeal is whether claims 20, 26, 27, 30-33 and 37 are unpatentable under 35 USC §103(a) in light of the background art discussed in the specification in view of Tomioka et al. (US Patent 5,428,880)?

GROUPING OF CLAIMS

The claims on appeal do not stand or fall together. Rather, each of the claims on appeal stands or falls on its own merits under the Issue above, as understood from the following arguments presented hereinbelow.

ARGUMENTS

The References

In the Background section of the present specification (pages 1-4), it is discussed that: previously a liquid, rust preventive wax has been used to form a protective film on the paint-finished surface of automobiles prior to shipping, but that the work involved in removing the wax at a destination is burdensome; that alternatively it is known to apply a pressure-sensitive, plastic film to cover the whole automobile, but this is also disadvantageous because it is costly; that it is known to apply strippable paint to small parts to form a protective film; and that *if* strippable paint were to be applied to the surface of an automobile similar to the rust preventive wax various problems would be encountered, including difficulties in forming a quality protective film caused by surface contaminations on the painted finish, clogging of windshield washer nozzles by the sprayed strippable paint, and increased work of removing the strippable paint and dust of same from rubber seals on the vehicle roof opening, winker lights, etc. once the vehicle reaches its destination.

Tomioka et al. (US Patent 5,428,880) discloses a conventional process for manufacturing a vehicle body for automobiles, including a painting step (PS) followed by an assembling step (MS) as shown in his Fig. 1.

The Rejection

As set forth at items 3-4 of the final Office Action, as well as at paragraph 4 of the prior Office Action (paper # 4), claims 20, 26, 27, 30-33 and 37 stand rejected under 35 USC §103(a) as being unpatentable over applicant's admitted prior art as defined in the specification in view of Tomioka et al. (U.S. Patent 5,428,880). It is the Examiner's position that the "Description of the Related Art" on pages 1-4 of the specification discloses a prior art method very similar to that being claimed (specifically "that it is known to paint an

automobile applying both a first coat thereto and then a strippable paint thereto"), except that such prior art method fails to literally disclose that the automobile is assembled after it has been painted; that it would have otherwise been obvious to one of ordinary skill in the art to assemble the automobile after painting it in view of Tomioka; that it would also have been obvious to one skilled in the art to coat strippable paint onto a painted automobile in order to realize the benefits that a strippable paint exhibits relative to a rust preventive wax as discussed at page 1, lines 17-21 and page 2, lines 7-8 in the specification; that "[r]egardless, when the strippable paint is applied relative to the assembling step is deemed to be a matter of design choice, because such sequence of steps per se solves no stated problem", that the subject matter of claims 24 and 26 would have been obvious because it is well known to inspect an assembled and painted products for quality control purposes; that the subject matter of claims 25 and 29 would have been obvious in view of Tomioka who teaches performing assembling operations as a final step; that the preliminary and non-preliminary drying step of claim 27 are met by the admitted prior art; and that the exact drying steps and stabilizing step set forth in claims 30-33 are deemed to be matters of design choice because they solve no stated problem.

Appellant's Arguments

Upon careful consideration and with regard to the Issue on appeal, appellant respectfully submits that the Examiner has not established prima facie obviousness under 35 USC §103(a) of any of rejected claims 20, 26, 27, 30-33 and 37, and that each of such claims is clearly patentably distinct over any hypothetical combination of "admitted prior art" and the Tomioka reference, based on the following.

Admitted Prior Art.

Initially, appellant respectfully submits that there is no admission "that it is known to paint an automobile by applying both a first coat thereto and then a strippable paint thereto", contrary to the Examiner's allegation. What the Background section of the application actually discloses are known, disadvantageous methods of applying a rust preventive wax and a plastic film to a paint-finished automobile. As would be plainly understood by persons skilled in the art, the language "paint-finished automobile" refers to an automobile having a finish paint coating thereon, as well as preliminary paint coatings applied prior to the finish coat. The Background section also mentions, not as any prior art admission, but simply as considerations facing the inventors, several potential problems of applying strippable paint to a paint-finished automobile to form a protective film thereon.

Improper Combination of Teachings.

Appellant further respectfully submits that the proposed hypothetical modifications of the relevant Background art discussed at pages 1-4 of the specification relative to select teachings of the Tomioka reference (assembly of an engine and functional parts to an automobile as the final step in the manufacturing process) is improperly based on a suggestion coming from the Examiner (as guided by impermissible hindsight gained from applicant's disclosure), rather than from any teaching or suggestion which may be fairly gleaned from the prior art. Although Tomioka generally discloses that fitting-out operations for mounting of parts such as an engine, tires, etc. to provide a completed vehicle may be performed after the application of a top or finish coating (a final painting step) in an automobile manufacturing process, Tomioka's manufacturing process does not involve a step applying a strippable paint

to a paint-finished surface. Rather, Tomioka's manufacturing process results in an automobile with a conventional paint-finished surface, i.e., Tomioka's top coating is the finish paint. Similarly, although a finished product inspection may be performed at the end of a conventional manufacturing process, such conventional process does not involve in any way formation of a temporary protective coating using strippable paint, liquid wax or a plastic film.

Conversely, the use/application of strippable paint according to the present invention, and the use of strippable paint, rust preventing wax or a plastic film as a temporary cover according to the Background art discussed at pages 1-4 of the present specification, is a *supplemental* process/step to a conventional automobile manufacturing process such as disclosed by Tomioka. See, for example, Japanese Patent Laid-open No. 267171/1991 discussed at pages 1-2 of the present specification, and U.S. Patents 5,281,436 and 5,428,095 to Swidler, which were cited by the Examiner in parent application USSN 08/398,881.

Given the actual teachings of the Tomioka reference relative to his automobile manufacturing process and the actual teachings of the prior art regarding use of liquid wax, plastic film, and strippable paint as temporary protective covers for previously manufactured paint-finished objects, persons of ordinary skill in the art would not have considered it obvious to hypothetically modify/combine these conventional teachings such that a temporary cover of strippable paint is applied to a paint-finished surface of an automobile at *an intermediate step* of the manufacturing process (i.e., prior to a fitting-out operation of mounting an engine and functional parts to the vehicle or prior to the final inspection) because the prior art references do not provide any suggestion or motivation for doing so. At

most, the prior art references teach or suggest the application of a temporary cover of strippable paint to a paint-finished surface of an automobile *subsequent* to such a fitting-out operation and *subsequent* to the final inspection of the manufactured automobile.

In this regard, appellant respectfully traverses the Examiner's allegation at the second-to-last paragraph on page 4 of the prior Office Action (paper #7) that "...when the strippable paint is applied relative to the assembling step is deemed to be a matter of design choice, because such sequence of steps per se solves no stated problem", because the claimed method including application of the strippable paint prior to the assembling step does, in fact, overcome a disadvantage of the prior art, i.e., by applying the strippable paint to the paint-finished surface *prior* to the assembling step applicant has advantageously eliminated the conventional steps of applying an anti-scratch cover over the paint-finished surface prior to the assembling step and removing the anti-scratch cover after the assembling step, as discussed above.

Similarly, although the claims do not preclude the use of an anti-scratch cover (in addition to the strippable paint protective film) as the Examiner notes at the first full paragraph on page 3 of the final Office Action, it is not necessary for the claims to do so. Rather, it is only necessary that the invention defined in the claims distinguish over the prior art in terms of novelty and non-obviousness, and it is appellant's position that they do.

As the Courts have consistently held, differences between a claimed invention and a prior art structure/process cannot be considered as matters of "mere design choice" where, as in the present case, there is no teaching or suggestion in the prior art that would lead one of ordinary skill in the art to modify the prior art process to include the specific structure/ steps

in the specific arrangement as claimed, and where the claimed invention achieves significant advantages over the prior art. See, for example, In re Chu, 36 USPQ 2d 1089, 1094, 1095 (Fed. Cir. 1995), In re Gal, 980 F.2d 717, 25 USPQ 2d 1076 (Fed. Cir. 1992), and In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Similarly, the Courts have consistently held that an Examiner may not, because of doubt that the claimed invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis necessary to establish prima facie obviousness under 35 USC §103. See In re Warner, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967). In the present matter, the proposed hypothetical modification/combination of the prior art references is nothing more than the speculation, unfounded assumption or hindsight reconstruction which the Courts have found to be insufficient to establish prima facie obviousness under 35 USC §103.

Other Features Presented In The Claims.

Further, appellant respectfully submits that the applied references do not disclose or in any way suggest a method of forming a protective film involving steps of preliminarily drying and non-preliminarily drying at elevated temperatures a strippable paint which has been coated on a paint-finished surface of the automobile in the specific manners as defined in claims 27, 30 and 33, or involving a step of stabilizing the coated strippable paint after it is coated on the automobile and prior to the preliminary drying step, as defined in claims 31 and 32. Mere drying of a strippable paint as generally discussed in the Background section of the present application, or a simple air-drying of a strippable paint at room temperature according to the Swidler references (U.S. Patent 5,281,436 and 5,428,095 cited in parent application

08/398,881) do not involve separate steps of sequentially stabilizing a coated strippable paint, preliminarily drying the stabilized paint and non-preliminarily drying of the paint as defined in claims 27 and 31, nor let alone the specific stabilizing step formed at room temperature and the specific preliminarily and non-preliminarily drying steps performed at elevated temperatures using IR radiation and hot air drying using first and second drying means, as defined in claims 27, 30, 32, 33 and 37. The general teachings of the prior art references plainly lack any factual basis necessary to establish prima facie obviousness of the claimed features under 35 USC §103(a).

Again, applicant respectfully traverses the Examiner's allegations that the claimed features are obvious matters of "design choice" because such allegations are clearly not supported by the actual disclosures of the prior art references, which do not even remotely suggest the claimed features, and are otherwise plainly refuted by the fact that the claimed process steps achieve significant advantages over the conventional teachings, including superior quality temporary covers of the strippable paint. See pages 14-15 of the specification. Applicant respectfully submits that the Examiner's allegations are, again, improper speculation, unfounded assumption or hindsight reconstruction, and insufficient to establish prima facie obviousness under 35 USC §103(a).

CONCLUSION

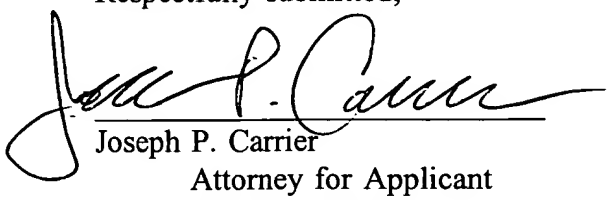
Based on all the foregoing comments, it is respectfully submitted that the Examiner has failed to establish prima facie obviousness under 35 USC §103(a) of the methods defined in any of claims on appeal. Correspondingly, applicant respectfully submits that the Examiner's rejection of the claims on appeal is in error, and a reversal of same is respectfully

requested.

Applicant encloses herewith triplicate copies of the present Brief, together with a check in the amount of $300.00 in payment of the fee for Brief on Appeal.

Favorable consideration and reversal of the final rejection are earnestly solicited.

Respectfully submitted,



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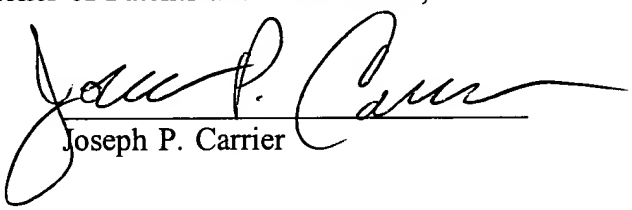
I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to Commissioner of Patents and Trademarks, Washington, D.C. 20231 on November 25, 1998.



Joseph P. Carrier

Dated: November 25, 1998
WFE/eb
Enclosures

APPENDIX

20. A method for forming a protective film on a paint-finished automobile using strippable paint, the method comprising the steps of:

painting the automobile so that it is paint-finished;

coating strippable paint on a painted surface of the paint-finished automobile; and

then assembling the paint-finished automobile by mounting an engine and functional parts thereto.

26. A method for forming a protective film on a paint-finished automobile according to claim 20, further including a step of finished product inspection following the assembly step.

27. A method of forming a protective film on a paint-finished automobile according to claim 20, further including the steps of:

preliminarily drying said coated strippable paint using a first drying means; and

non-preliminarily drying the preliminarily dried, strippable paint using a second drying means.

30. The method of claim 27, wherein said step of preliminarily drying said strippable paint uses infrared radiation from said first drying means and said step of non-preliminarily drying said strippable paint uses hot air from said second drying means.

31. The method of claim 27, further including the step of stabilizing the strippable paint after it is coated on said product and prior to said preliminary drying step.

32. The method of claim 31, wherein said stabilizing step is performed at room temperature.

33. The method of claim 27, wherein said preliminary and non-preliminary drying steps are performed at elevated temperatures.

37. The method of claim 32, wherein said preliminary and non-preliminary drying steps are performed at elevated temperatures.